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EXAMINER

HERRERA, DIEGO D

ART UNIT

PAPER NUMBER

2617

DATE MAILED: 11/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/824,800	Applicant(s) SCHREYER ET AL.	
	Examiner Diego Herrera	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/18/2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 2 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Examiner takes notice of amendments made to claim 1; and the cancelled claim 2; and the addition of claims 13-23.

Response to Arguments

Applicant's arguments with respect to claims 1-23 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Art Unit: 2617

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lynch (U.S. Patent # 6,055,429), and in view of Larsen et al. (U.S. Patent # 6,473,617 B1).

5. Regarding claim 1, Lynch shows and discloses a method for registering a new subscriber in a radio system having a central system and a plurality of subscribers (Fig. 1, note: figure 1 shows multiple users in the vicinity and the base station being the central system providing radio communication service), said central system and said subscribers comprise a transmission and a receiving device (Fig. 1 & 4, note: base station communicating with user 34 in figure 1, also block diagram of components in the user equipment has a transceiver), said subscribers can establish direct radio contact with the central system or indirect contact via one or more other subscribers as routers (Fig. 1, note: objects: 40, 38, 37, 39, 34, and base {indirect contact}, col. 3, lines: 45-52 {direct & indirect capabilities}), said method for registering comprising the following steps:

- a. A new subscriber sends a search signal to all subscribers that can be reached and selects a first router from subscribers that respond (col. 4, lines: 58-63, note: this is only talking about sending a signal and creating a list of possible routing paths obtained from an audit of proximal subscribers. Fig. 1, shows a plurality of subscribers that establish a link to a subscriber and then to a central communication system);
- b. However, Lynch does not specifically goes into detail about the following limitations of this application as shown below:
- c. The new subscriber sends a registration request to the first router in the form of a message, said message contains a provisional address and an identifier of the central system assigned to the first router; after the registration request from the first router has been forwarded to the central system, the central system decides whether to accept or reject the registration request, and if accepted, the central system sends a response via the first router which contains a subscriber number and a system identifier which is accepted and stored by the new subscriber.
- d. Nevertheless, Larsen et al. does teach the new subscriber sends a registration request to the first router in the form of a message (col. 8 lines: 51-57), said message contains a provisional address and an identifier of the central system assigned to the first router (col. 8 lines: 51-57); after the registration request from the first router has been forwarded to the central system, the central system decides whether to accept or reject the registration request (col. 8 lines: 44-50), and if accepted, the

central system sends a response via the first router which contains a subscriber number and a system identifier which is accepted and stored by the new subscriber (col. 9 lines: 9-20).

e. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the invention of Lynch et al. to specifically include the new subscriber sends a registration request to the first router in the form of a message, said message contains a provisional address and an identifier of the central system assigned to the first router; after the registration request from the first router has been forwarded to the central system, the central system decides whether to accept or reject the registration request, and if accepted, the central system sends a response via the first router which contains a subscriber number and a system identifier which is accepted and stored by the new subscriber as taught by Larsen et al. for the purposes of effective zone coverage (abstract)

6. Consider claim 3, and as applied to claim 1 above, the combination of Lynch and Larsen shows and discloses wherein after the new subscriber sends the search signal and the subscribers located within range respond by sending their address and an identifier of their system to the new subscriber, the new subscriber store the addresses and the associated system identifications in a list of potential routers, for which it defines the order in accordance with a pre-specified evaluation algorithm, and the new subscriber selects its first router from the list in accordance with its order and if its registration request is rejected by

Art Unit: 2617

the system of the first router, selects a further router in each case in accordance with the pre-specified order of the list for sending the registration request again (Abstract; col. 1, lines: 22-27, Lynch teaches proximity or strongest signal)(abstract, col. 5 lines: 26-33, Larsen teaches multiple stations and relaying units).

7. Consider claim 4, and as applied to claim 3 above, the combination of Lynch and Larsen shows and discloses wherein the new subscriber defines the order of potential routers on its list in accordance with the strength of the response signal (Abstract; col. 4, lines: 52-58, Lynch teaches the power transmission mentioned in reference is understood as signal strength, also, "the multilevel audit buffering provides for establishment of call vectoring paths between a seeking transceiver unit and a desired transceiver unit") (Larsen teaches col. 10 lines: 19-29 the base station allocates information to the mobile device as to connect directly or indirectly depending on resources available then the mobile device use those resources that are relevant in order to carry out function).

8. Consider claim 5, and as applied to claim 3 above, the combination of Lynch and Larsen shows and discloses wherein the new subscriber first checks whether a central system is responding to its search telegram and that in this case it puts the central system at the top of its list (col. 1, lines: 22-27, note: the selected section mentions that communicating with cell site or base unit, which is considered to be part of and/or a central system, is done as the initial step in establishing communication between the mobile and networks depending on

Art Unit: 2617

signal strength (transmission power) and proximity) (Larsen also teaches this limitation on col. 8 lines: 58-64, where the mobile device listens for a base station or/and mobile stations in the vicinity).

9. Consider claim 6, and as applied to claim 3 above, the combination of Lynch and Larsen shows and discloses wherein the new subscriber defines for the order of its list of potential routers how many hierarchy stages away each responding system is from its central system (col. 2, lines: 47-55, note: the system uses a multilevel audit making a list of potential routers. col. 4, lines: 58-63, note: the information provided is able to create a vector to desired system in order to establish communication).

10. Consider claim 7, and as applied to claim 3 above, the combination of Lynch and Larsen shows and discloses wherein the new subscriber evaluates the system identifiers of the responding subscribers for the order of its list (col. 4, lines 64-67, continuation, col. 5, lines: 1-9, note: the audit helps new subscriber be able to determine desired router).

11. Consider claim 9, Lynch does not discloses and shows wherein the new subscriber notifies the central system about the field strength with which it is receiving the signals from the subscribers that it can reach, and the central system creates from this data an optimum system configuration for transmission of messages via routers and notifies the subscribers of the radio system of this configuration.

12. Nevertheless, Larson et al. shows and discloses the new subscriber notifies the central system about the field strength with which it is receiving the

Art Unit: 2617

signals from the subscribers that it can reach, and the central system creates from this data an optimum system configuration for transmission of messages via routers and notifies the subscribers of the radio system of this configuration (col. 8, lines: 25-38, note: the word "hear" is understood to be strength, id, and other information transmitted between the new user and other users in the vicinity to be able to communicate to the base station).

13. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teaching of Lynch to send information received by the new user about other subscribers that it can reach, and the central system creating from this data an optimum system configuration for transmission of messages via routers and notifies the subscribers of the radio system of this configuration taught by Larson et al. for the purpose of the base station control the levels of modulation efficiency and the associated required carrier to interference ratio used by itself and the mobile stations in its area (col. 8, lines: 40-43).

14. Consider claim 10, and as applied to claim 1 above, the combination of Lynch and Larsen shows and discloses wherein the telegrams of the new subscriber in each case with their provisional address, are forwarded in precisely the same way as the telegrams with a unique address (col. 8 lines: 32-38, Larsen teaches that the information is given to the base station), in which case on the way to the central system the routers of the subscribers through which the messages pass are marked so that the response from the central system to the registering subscriber travels back on the same path (col. 2, lines: 21-27; col. 2,

Art Unit: 2617

lines: 47-55, col. 8, lines: 66-67, continuation, col. 9, lines: 1-7, Lynch teaches these selected sections are descriptive of a system that stores information with address or identifiers of the vector path define by new user or subscriber establishing communication with desired central system in which communication is set back and forth from A-B-C to C-B-A, since the Fig. 4 shows a duplex system and Fig. 5 shows path consideration where if the path is broken another is chosen but if not it uses the same path to transmit information).

15. Consider claim 11, and as applied to claim 10 above, the combination of Lynch and Larsen shows and discloses wherein the subscribers through which the messages pass are marked by collecting their relevant addresses in the forwarded telegram (Abstract, Fig. 1 & 5, col. 2, lines: 47-55, col. 4, lines: 58-63 note: these reference shows and discloses a list of identifiers of different subscribers near the vicinity that is made by auditing, which said list is used to plot a location vector based on transmitting power ratings and other information necessary to establish communication with central system. Hence, the list is marking said subscribers with greatest transmitting power and addresses for communication from auditing) (col. 10 lines: 19-36, Larsen teaches ways that the base station can control the mobile device by the information provided to the base station by the mobile device).

16. Consider claim 12, and as applied to claim 10 above, the combination of Lynch and Larsen shows and discloses wherein the subscribers through which the messages pass are marked by an identifier which allows routing with distributed lists (Abstract, Fig. 1 & 5, col. 2, lines: 47-55, col. 4, lines: 58-63 note:

Art Unit: 2617

these reference shows and discloses a list of identifiers of different subscribers near the vicinity that is made by auditing, which said list is used to plot a location vector based on transmitting power ratings and other information necessary to establish communication with central system. Hence, the list is marking said subscribers with greatest transmitting power and addresses for communication from auditing).

17. consider claim 13, the combination of Lynch and Larsen a method for registering a new subscriber in a radio system having a central system and a plurality of subscribers, said central system and said subscribers comprise a transmission and a receiving device, said subscribers can establish direct radio contact with the central system or indirect contact via one or more other subscribers as routers, said method for registering comprising the following steps:

- a. a new subscriber sends a search signal to all subscribers that can be reached and selects a first router from subscribers that respond (col. 4, lines: 58-63; Lynch teaches that this is only talking about sending a signal and creating a list of possible routing paths obtained from an audit of proximal subscribers. Fig. 1, shows a plurality of subscribers that establish a link to a subscriber and then to a central communication system);
- b. However, Lynch does not specifically goes into detail about the following limitations of this application as shown below:

Art Unit: 2617

c. Nevertheless, Larsen et al. does teach the new subscriber sends a registration request to the first router in the form of a message (col. 8 lines: 51-57), said message contains a provisional address and an identifier of the central system assigned to the first router (col. 8 lines: 51-57); after the registration request from the first router has been forwarded to the central system, the central system decides whether to accept or reject the registration request (col. 8 lines: 44-50), and if accepted, the central system sends a response via the first router which contains a subscriber number and a system identifier which is accepted and stored by the new subscriber (col. 9 lines: 9-20).

d. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the invention of Lynch et al. to specifically include the new subscriber sends a registration request to the first router in the form of a message, said message contains a provisional address and an identifier of the central system assigned to the first router; after the registration request from the first router has been forwarded to the central system, the central system decides whether to accept or reject the registration request, and if accepted, the central system sends a response via the first router which contains a subscriber number and a system identifier which is accepted and stored by the new subscriber as taught by Larsen et al. for the purposes of effective zone coverage (abstract).

Art Unit: 2617

20. consider claim 14, and as applied to claim 13 above, the combination of Lynch and Larsen wherein after the new subscriber sends the search signal and the subscribers located within range respond by sending their address and an identifier of their system to the new subscriber, the new subscriber stores the addresses and the associated system identifications in a list of potential routers, for which it defines the order in accordance with a pre-specified evaluation algorithm, and the new subscriber selects its first router from the list in accordance with its order and if its registration request is rejected by the system of the first router, selects a further router in each case in accordance with the pre-specified order of the list for sending the registration request again (Abstract; col. 4, lines: 52-58, Lynch teaches the power transmission mentioned in reference is understood as signal strength, also, "the multilevel audit buffering provides for establishment of call vectoring paths between a seeking transceiver unit and a desired transceiver unit") (Larsen teaches col. 10 lines: 19-29 the base station allocates information to the mobile device as to connect directly or indirectly depending on resources available then the mobile device use those resources that are relevant in order to carry out function).

21. consider claim 15, and as applied to claim 14 above, the combination of Lynch and Larsen wherein the new subscriber defines the order of potential routers on its list in accordance with the strength of the response signal (col. 2, lines: 47-55, note: the system uses a multilevel audit making a list of potential routers. col. 4, lines: 58-63, note: the information provided is able to create a vector to desired system in order to establish communication).

Art Unit: 2617

22. consider claim 16, and as applied to claim 14 above, the combination of Lynch and Larsen wherein the new subscriber first checks whether a central system is responding to its search signal and that in this case it puts the central system at the top of its list (Abstract; col. 4, lines: 52-58, Lynch teaches the power transmission mentioned in reference is understood as signal strength, also, "the multilevel audit buffering provides for establishment of call vectoring paths between a seeking transceiver unit and a desired transceiver unit") (Larsen teaches col. 10 lines: 19-29 the base station allocates information to the mobile device as to connect directly or indirectly depending on resources available then the mobile device use those resources that are relevant in order to carry out function).

23. consider claim 17, and as applied to claim 14 above, the combination of Lynch and Larsen wherein the new subscriber defines for the order of its list of potential routers how many hierarchy stages away each responding system is from its central system (Abstract; col. 4, lines: 52-58, Lynch teaches the power transmission mentioned in reference is understood as signal strength, also, "the multilevel audit buffering provides for establishment of call vectoring paths between a seeking transceiver unit and a desired transceiver unit") (Larsen teaches col. 10 lines: 19-29 the base station allocates information to the mobile device as to connect directly or indirectly depending on resources available then the mobile device use those resources that are relevant in order to carry out function).

Art Unit: 2617

24. consider claim 18, and as applied to claim 14 above, the combination of Lynch and Larsen wherein the new subscriber evaluates the system identifiers of the responding subscribers for the order of its list (col. 8 lines: 10-31, Larsen teaches that there is a order to a what the mobile device is trying to establish communication with, first looking for a base station and then relaying devices to base station).

25. consider claim 19, and as applied to claim 13 above, the combination of Lynch and Larsen wherein the new subscriber notifies the central system about the field strength with which it is receiving the signals from the subscribers that it can reach, and the central system creates from this data an optimum system configuration for transmission of messages via routers and notifies the subscribers of the radio system of this configuration (col. 9 lines: 21-33, Larsen teaches the regular check-in of mobile devices sending information to the base station reporting the status of other mobiles around them and retrieving information of path loss updating their configuration as to monitor the system configuration).

26. consider claim 20, and as applied to claim 13 above, the combination of Lynch and Larsen wherein the signals of the new subscriber in each case with their provisional address, are forwarded in precisely the same way as the telegrams with a unique address, in which case on the way to the central system the routers of the subscribers through which the messages pass are marked so that the response from the central system to the registering subscriber travels back on the same path (Larsen teaches col. 10 lines: 19-29 the base station

Art Unit: 2617

allocates information to the mobile device as to connect directly or indirectly depending on resources available then the mobile device use those resources that are relevant in order to carry out function)

27. consider claim 21, and as applied to claim 20 above, the combination of Lynch and Larsen wherein the subscribers through which the messages pass are marked by collecting their relevant addresses in the forwarded telegram (Abstract; col. 4, lines: 52-58, Lynch teaches the power transmission mentioned in reference is understood as signal strength, also, "the multilevel audit buffering provides for establishment of call vectoring paths between a seeking transceiver unit and a desired transceiver unit") (Larsen teaches col. 10 lines: 19-29 the base station allocates information to the mobile device as to connect directly or indirectly depending on resources available then the mobile device use those resources that are relevant in order to carry out function).

28. consider claim 22, and as applied to claim 20 above, the combination of Lynch and Larsen wherein the subscribers through which the messages pass are marked by an identifier which allows routing with distributed lists (Abstract, Fig. 1 & 5, col. 2, lines: 47-55, col. 4, lines: 58-63 note: these reference shows and discloses a list of identifiers of different subscribers near the vicinity that is made by auditing, which said list is used to plot a location vector based on transmitting power ratings and other information necessary to establish communication with central system. Hence, the list is marking said subscribers with greatest transmitting power and addresses for communication from auditing).

Art Unit: 2617

29. consider claim 23, and as applied to claim 13 above, the combination of Lynch and Larsen wherein if the registration request is rejected by the central system, the new subscriber selects another first router of another radio cell and sends a registration request via this router to its central system (col. 10 lines: 19-36, Larsen teaches that the base station instructs the mobile device what resources to use directly with the base station or with a "relay device" in other words depending on availability of resources is the mobile device able to communicate).

Allowable Subject Matter

Claim 8 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory

Art Unit: 2617

action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Diego Herrera whose telephone number is (571) 272-0907. The examiner can normally be reached on Monday-Friday, 6:30 AM-3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kincaid G. Lester can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Art Unit: 2617

DH



WILLIAM CUMMING
PRIMARY EXAMINER